

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for improving utilization in a peer-to-peer network having a plurality of nodes, the method comprising:
 - hosting one or more storage slots in each node in the peer-to-peer network;
 - wherein:
 - each node comprises a respective amount of physical storage capacity;
 - each storage slot represents a predefined amount of storage capacity;
 - each node hosts a number of storage slots representing a total amount of storage capacity greater than the node's physical storage capacity, wherein each node is allocated $2 \times N - 1$ virtual slots, where N equals the physical storage capacity of the node divided by the predefined amount of storage capacity of a storage slot; and
 - at each node, a first portion of the storage slots host storage zones and any remaining storage slots are allocated as free slot reserve storage slots;
 - the method further comprising:
 - storing data in the storage slots hosting storage zones; and
 - when a storage slot hosting a storage zone reaches a full capacity of the storage zone,
 - splitting the data in the storage slot hosting the storage zone into a first and second portion,
 - converting a free slot reserve storage slot into a new storage slot hosting a storage zone, and
 - transferring the second portion of the data to the new storage slot hosting the storage zone.
2. (Cancelled)

3. (Cancelled)
4. (Previously Presented) The method of claim 1 wherein a storage zone at a node is transferred to another node in the peer-to-peer network if the data inserted into the storage zones at the node fills the actual physical capacity of the node.
5. (Original) The method of claim 4 where a local search for candidate nodes in a transfer set is conducted prior to transfer of the storage zone.
6. (Previously presented) The method of claim 1 wherein the new storage zone is transferred to and hosted by a free slot reserve storage slot on a different node when the storage zones hosted at the node exceed the storage slots allocated at the node.
7. (Original) The method of claim 6 where a local search for candidate nodes in a transfer set is conducted prior to transfer of the new storage zone.
8. (Original) The method of claim 1 wherein the data is associated with hashkeys of a hash function and where each storage zone is responsible for a subset of all hashkeys.
9. (Original) The method of claim 8 wherein the hashkeys are uniformly distributed by the hash function.
10. (Original) The method of claim 1 wherein the storage slots are of a fixed-size.
- 11 – 20. (Cancelled).
21. (Previously presented) The method of claim 1, wherein each storage zone is hosted by a storage slot located within a particular physical node.

22 – 24. (Cancelled).

25. (Previously Presented) The method of claim 1, wherein a zone is hosted within a slot and a size of the slot is a system wide constraint representing the limit size to which a zone can grow before it fills the slot and must be split.

26. (Cancelled).

27. (Cancelled).